



SAVE THE SPHINX

The Sphinx at Giza & 1000s of Egyptian tombs are facing a new and dire threat in their desert existence - water and salt. Archaeologists say little will be left of Egypt's wonders if urgent action is not taken to arrest effects of a rising water table. *"We are watching a complete record of more than 4,000 years of history crumble in front of our eyes,"* says **Naguib Kanawati**, Professor of Egyptology at Sydney University. While believing the pyramids are safe... *"The Sphinx, however, is a sculpture and if its features disappear it will be nothing more than a lump of stone."*

The rise in moisture during the last twenty years has caused more damage than during the last four millenia. The construction of the high dam at Aswan made constant irrigation possible along the Nile but has caused the water table to rise. *"The water table is now just below the surface and the sandstone monuments soak it up - it's like putting a piece of chalk in water,"* says Prof. Kanawati. In early 1988 a 300 kg chunk of stone fell from the Sphinx's right shoulder, successfully overcoming the delays to developing a plan to preserve the monument.

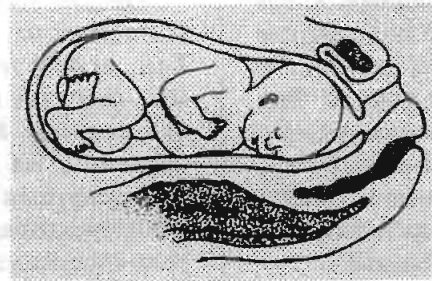
In May this year an international group of experts met in Cairo to help save the Sphinx. They attached a computerised weather station to the body of the Sphinx which will measure all major climatic and pollution effects on the monument. Modern industrial changes to the atmosphere including acid rain have taken their toll.

The increased humidity is causing organic materials including mummies, wood, clothing and furniture to rot. In the past two decades, recovered wooden

items have had the consistency of cork; previously, wooden coffins had been recovered intact with inscriptions and carvings. Salt is already damaging many of Egypt's wall paintings and experts believe that without drastic action, none will remain within a century. **N**

LITTLE CAESARS SPREADING

One in six babies in Australia is born by caesarian section; a figure widely viewed as unacceptably high and clear evidence of unnecessary medical intervention. One-third of these caesarians are automatically performed on women who had earlier caesarian 'deliveries'.



"There are many repeat cases of caesarians being performed without any good evidence that they are necessary," says Professor **Michael Bennett**, Clinical Director of Paddington's Royal Hospital for Women in Sydney.

"Some obstetricians still believe 'once a caesarian, always a caesarian'. They are wrong - and there is incontrovertible evidence to show they are wrong... There used to be a financial incentive," he replied when asked why the Australian rate of caesarians had quadrupled from 4% in the late 1960s to about 17% in the late 1980s. "Old habits die hard." An extra Medicare payment was made to obstetricians performing caesarians until August 1987.

TIDES OF MEN

Science is discovering that men, as well as women, are affected by the moon. According to a British Medical Journal study, men's bladders block more frequently during New Moon than at other lunar phases.

685 men went to St Mary's Hospital in Portsmouth with acute urinary retention between August 1985 and July 1988. One third of the cases occurred within three days of a new moon. Similar findings were recorded at the Freeman Hospital in Newcastle-upon-Tyne.

This lunar pattern *"may be due to a physiological tidal-wave causing an unaccustomed fluid load to be presented to the bladder,"* the study found. **N**

Professor Bennett points out that four times as many women die during caesarian operations than in 'natural' childbirth. Recent Australian statistics also indicate that home birth is actually safer than hospital deliveries in general.

According to **Dr Paul Lancaster**, director of the National Perinatal Statistics unit at Sydney University, some obstetricians perform caesarians in 40-50% of births.

"Consensus studies show that 8-10% is sufficient to meet the needs of western society," he says. Opinion is so divided that some doctors "would like to see a 100% caesarian rate." He reports that one Chicago hospital cut its rate from 17% to 11% by ensuring detailed reasons for the operation were recorded and by seeking a second medical opinion in each case.

"The chance of ending up with a caesarian increases significantly if you are privately insured and seeing a private obstetrician," reports Zena Armstrong, author of *Caesarian Birth - A Reassuring guide for Australian Parents*.

"More than 30,000 babies are delivered by caesarian section every year in Australia. There is no doubt that many of these caesarians are avoidable and that many women and their babies are being subjected to unnecessary risks in surgery. Doctors, midwives, hospital authorities and, above all, parents must push for change." **N**

— RETURN OF THE GODDESS —

It has often been argued that the original Hebrews worshipped **more than** the 'one god' YHVH (Jehovah or Yahweh) of Judeo-Christian teaching. But evidence



may have come to light that this male deity originally ruled with a female consort, and that the worship of the Goddess was deliberately destroyed by the priests of 'God the Father'.

Supporting feminist views that scriptures have

been repeatedly edited by an all-male group with a vested interest in suppressing the female in organised worship, archaeological findings in southern Israel have uncovered inscriptions and drawings which indicate that around the 9th century BCE the goddess **ASHERAH** (*Ashtaroth, Astarte, Esther*) was identified as the consort of Yahweh, God of Israel.

For centuries ideological and actual battles for control occurred between monotheists, who believed Yahweh ruled alone, and those who worshipped several deities. Asherah is mentioned in the Bible many times, one of a range of gods and goddesses worshipped in ancient Canaan - modern Israel and Syria - as well as elsewhere. Asherah, however, seems to have influenced the Israelite tradition far more than the others, having been worshipped in Solomon's temple intermittently for over two thirds of the 370 years of its existence.

According to **Dr Bill Jobling**, Reader in Religious Studies at Sydney University, the latest discovery indicates that Yahweh really was originally worshipped by the Israelites as a member of a pantheon of gods.

The Asherah find was originally made in 1975 by **Dr Zeev Meshel** of the Tel Aviv Institute of Archaeology, who uncovered a small wayside shrine at Kuntillet Ajrud, a lone hill of water wells in the desert 50km south of Beersheba.

Dr Meshel believes all or most other wayside shrines were destroyed by monotheistic reformers who wanted only one holy place - the temple in Jerusalem. He thinks Kuntillet Ajrud survived because it had been abandoned 150 years before 300 years of reformist purges which began in the 9th century BCE.

The shrine is the size of a large house and preserved an array of Hebrew and Phoenician inscriptions painted on plaster walls and tall offering jars, or pithoi. The inscriptions contain the Hebrew names of God - El and Yahweh, as well as the names of other pagan deities... including Baal - not unusual, "for every spring, river, village had its own Baal", according to Dr Meshel.

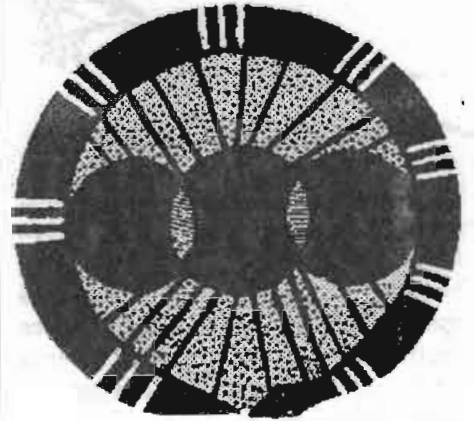
One inscription over a painting of a woman playing a lyre - thought to be Asherah - on a pithos reads; "...May you be blessed by Yahweh of Shomron (Samaria) and his Asherah." Another reads; "*Amaryau said to my Lord... May you be blessed by Yahweh... and his Asherah.*" Other drawings include the Tree of Life with two ibex leaping at it from either side and a striding lion.

"We have in the Bible a manifesto that Jerusalem was the chosen city, David the chosen king and his line the true succession under a contract with Yahweh, and the old tradition of Moses," says Dr Meshel. The suppression of Asherah can now be seen as the result of the "near-total suppression of the cult by the eighth to sixth century reformers," says Professor William Dever, biblical archaeologist from the University of Arizona, who believes that Asherah was worshipped as the Mother Goddess and consort of Yahweh.

The find, taken with other evidence, shows "*a more inclusive, wholistic concept*" of God, according to Sister **Elaine Wainwright**, a Brisbane Catholic theologian. She believes biblical evidence of women's roles is slender because of the editing by "*those with a vested interest in the patriarchy and thus in loosening the voice of women*" and that the strong male symbols of god coincided with the male-dominated rise of the kings. N

— ABORIGINAL LORE REVIVED —

Aborigines are practicing traditional Aboriginal law around the Newcastle-Lake Macquarie area for the first time in almost fifty years.



More than twenty Murrawon men, led by an old and powerful man known as '**Uncle Lenny**' Da Silva, have been undergoing initiation and secret ceremonies in a revival of the old ways. Murrawon law involves commitment to acting as custodians or protectors of sacred country and is a belief system rooted in the Dreaming stories of the country. The Murrawon are a collective of initiated men from seven different NSW language groups.

"*Don't ever let it be said that in this State, Aboriginal law and culture and society has died,*" said **Bill Smith**, Chairperson of the Murrawon Initiated Men's Council, during an "important mission" to the Australian Museum in Sydney aimed at securing the return of sacred artefacts.

"*Our culture is very, very much alive and breathing. The Murrawon men have always had the law; it's just that they have never had the opportunity or the guidance to come together and practice ceremonies,*" he said. Uncle Lenny, from Armidale, has been the keeper of complex and sacred Aboriginal law since his initiation in the 1930s.

"The old fella came forward [about two years ago]," explains Mr Smith. "He knew that we, us men, would be genuine about going to do the law." Mr Smith, who isn't a full-blood Aboriginal says, "*It's not your colour or how you look, it's what you believe in*". N

-AGENT ORANGE TURNAROUND-

In a landmark decision, the safety of Agent Orange and related agricultural chemicals has been brought into open question once again.



The Administrative Appeals Tribunal found in favour of a widow who had been fighting for more than 8 years to prove her husband died as a result of chemicals sprayed on him in Vietnam. Mrs Maree Smith, whose husband died of cancer in 1977, will now receive a backdated war widows pension.

In response the Federal Minister for Veterans Affairs, Mr Humphries, called for an urgent report on Agent Orange; there has been an avalanche of new evidence linking exposure to the chemical and its derivatives to cancer and birth defects in children. Agent Orange is now a generic term for all phenoxy herbicides composed of 2,4,5-T or 2,4-D.

The tribunal's decision also lends credence to the view that combined effects of these and a cocktail of other chemicals sprayed on veterans has been disastrous for their health. This viewpoint was curiously rejected by the notorious Evatt Royal Commission into Agent Orange - which quoted chemical company documents verbatim in its findings to 'prove' these chemicals were safe and disallow compensation claims - despite opposite findings by wider studies in the US and elsewhere.

Also in May a panel of scientists in the US reported that studies led to the "inescapable" conclusion that non-Hodgkin's lymphoma, soft-tissue sarcoma, certain liver ailments and a skin condition making tissue vulnerable to being torn, in addition to chlorachne, are linked to exposure to Agent Orange.

Their review also showed an even chance that the chemical is also related to certain neurological conditions, birth defects, Hodgkin's disease and sterility problems in Vietnam veterans, their spouses and children. N

— PLASTIC MONEY WINS —

First the bad news; Australian Reserve Bank will begin phasing out all paper money this year, replacing it with more durable plastic notes after the success of the Bicentenary \$10 note. The new notes will all be redesigned. The first to be replaced will be the \$5 note. *Now the good news... there will be no \$5 coin.* N

— VIRTUAL REALITY —

In a unique convergence of video, audio and computer technology, a sensory marvel is taking shape. Computer hardware and software company VPL of Redwood City in southern California has designed a system that allows users to create their own fantasy world on a computer screen - and then to enter into it...



VPL helped to design a 'dataglove' used by NASA for space simulations. The glove is connected to a computer and becomes a 'virtual hand', interacting with objects depicted on-screen.

Now, a VPL team, under the leadership of 29-year old Jaron Lanier, has designed a complete body suit - fully equipped with umbilical cables connected to head, back and limbs.

Added to the suit is a pair of 'eye phones', virtual reality goggles which are two colour TV monitors. Two silicon graphics computers - one for each eye - produce the images... and complemented by headphone speakers to relay virtual sounds. Using a VPL-designed modelling program called Swivel 3D on

— ULTRA VIOLET CHILDREN —

Australasian children may have to wear optic sunglasses from the age of three or four years to avert eye damage caused by the thinning ozone layer.

Evidence shows a link between excessive exposure to UV light and eye cataracts, according to Ian Favilla, optomologist at Melbourne's Monash Medical Centre. This could result in an extra 36,000 cases of eye problems a year in Australia, he said earlier this year.

"It takes 20 to 30 years for the eye to build up protective mechanisms. The eyes of a child are very vulnerable and damage to them is cumulative."

A report to the June ozone conference showed a 5% thinning of ozone across the Australian mainland, linked to the so-called ozone hole over the antarctic. This is a debate which Australia and New Zealand will have to lead; the northern industrialised nations are responsible for the damage, but are not yet experiencing it directly and are more complacent about the urgent action required. N

an Apple Macintosh, a world designer first draws a floor plan of their universe. Then 3D objects are added to complete the view. Once inside a body suit, a user can actually enter their own creation, experiencing a perspective from inside their world, which they can explore.

Observers of VPL bodysuit displays see users writhing about in their suits as they explore virtual reality, while their figures appear on display screens of their private cosmos. Some describe the experience like being inside an animated cartoon.

Jaron Lanier predicts a day when homes will have their own Home Reality Engine which will allow people to experience other cultures, lands or even history as though they were part of it.

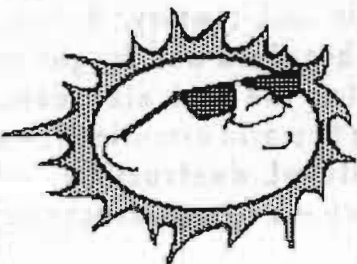
"You can play back exactly what you experienced," says Lanier. "Experience becomes something you can store on a computer file," he said.

"I have toyed with the idea of opening a Virtual Reality Parlour... sort of a salon scene where people would have virtual reality conversations and share wild experiences." N

- PLANTS GROW HUMAN PARTS -

Plants are being used as miniature factories to produce large amounts of biological chemicals. Using advanced biotechnology, scientists have grown tobacco plants that produce human antibodies, potatoes that make serum albumin (a human blood protein used widely in surgery), and rape plants that make enkephalin, a natural painkiller normally produced in the human brain.

One Californian biotechnology company is planning to market a sunscreen containing human melanin (skin pigment) which was also grown in tobacco. Jeremy Rifkin, President of the Foundation on Economic Trends, says "Turning living creatures into chemical factories" has obvious benefits, but "the environmental and ethical implications have not been explored. If the plants are raised outdoors and the new genes get into the wild gene pool, it could have a potentially destabilising effect on the



ecological system. They are performing processes not performed in nature."

Genetically altered plants can produce larger amounts of useful human proteins than conventional yeasts, bacteria or animal cells into which human genes are implanted for the purpose. Plants generally take care of themselves and require far less culturing or tending.

Genes can be transferred into plant cells with ease, and the plants can be grown by the acre to produce massive amounts of hitherto almost unobtainable chemicals. A system developed by Biosource Genetics carries

genes into plant cells using an RNA molecule which multiplies and spreads itself and the foreign gene throughout a plant, which will then produce human protein. The RNA degrades with time, according to Biosource President Erwin, and the foreign gene is never passed on to subsequent generations. Their first product is plant-derived human melanin - naturally better at scattering ultraviolet radiation than chemical sunscreens. **N**

— GIVE BLOOD... OR ELSE —

The NSW Government passed legislation last May to test all prisoners in NSW for the AIDS virus. This seems a very good idea, although civil liberties and prisoners' organizations and others have reservations.

Despite the announcement from Peter Anderson, Opposition spokesperson on law & order, that there was "dubious policy justification" for these changes and that there are no proper measures to guarantee confidentiality, the legislation was not opposed. Mr Anderson also described the bill as "dangerous, in so far as it appears to be dealing with a serious problem and, in fact, does nothing," before he recommended that it be passed anyway.

Under the new system, all prisoners will be compulsorily tested upon entry into the prison, three months later and on departure. As under similar anti-drugs legislation recently enacted around Australia, necessary force may be used to

ensure prisoners give a blood sample.

But perhaps the new system does do something after all. State and Federal police forces have recently begun to put in place a Gene Bank (similar to fingerprint file) for identifying criminals by body tissue (blood, semen, hair, skin etc) left at the scene of a crime.

Some prisoners' organizations and others have pointed out that in order to build such a genetic data bank, the data has to come from somewhere - preferably blood samples from known criminals.

But how could you persuade known prisoners to voluntarily donate blood for such a purpose? You couldn't. Was this legislation passed without opposition for this reason?

It would be easy to dispel such announced fears with an official denial, but so far none has been forthcoming.

Recent tests of blood from 5,000 Australian servicemen & women showed no signs of contamination with HIV, the human immuno-deficiency virus. **N**

— ELDER AUSTRALIANS —

Stone artefacts found in a cave floor at Kakadu have pushed back the 'official' dating of Aboriginal occupation of Australia by tens of millennia.

Reported in Nature in May, the Malakunanje II rock shelter - occupied 60,000 to 65,000 years ago - "represents the oldest direct dating of art in the world," said Dr Rhys Jones, Australian National University, leader of a 3 person team that announced the discovery.

"It's extremely exciting, because I regard art as probably the most important artefact of the past, because it encodes so much information about human brain function, perception and our view of nature."

The occupation date overlaps that of the 'Solo people', a group that occupied Java from 110,000 to 55,000 years ago. An almost continual fossil record now links the Solo people with Java Man, a form of Homo erectus, a presumed ancestor of modern humans. "Robust" human skulls found at Kow Swamp in Victoria and the Mungo-Willandra Lakes region of south-western NSW, closely resemble those of Solo people.

Elsewhere in Australia ancient skulls are unmistakably those of modern humans. Yet skulls of modern Aborigines from various parts of Australia often show



features intermediate between Solo and modern humans. A skull found in the Willandra region not far from the 30,000 year old Lake Mungo site is radically different from the Mungo remains, indicating Australia may have been simultaneously inhabited by two very different races of people; one Homo Erectus & one Homo Sapiens (modern-style humans). The Malakunanje II rock shelter may trigger a sweeping revision of dates assigned to other human sites around the continent. But a new method for extracting DNA in blood extracted from fossilised bones being tested at the ANU may provide more accurate carbon dating & interesting genetic information than any breakthrough to date. **N**